HYPLEUROCHILUS BANANENSIS (POLL, 1959) (BLENNIIDAE). NEW RECORD FOR THE EUROPEAN ATLANTIC COAST AND FOR THE SPANISH FAUNA

by

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ABSTRACT. - The occurrence of *Hypleurochilus bananensis* (Poll, 1959) on the South Atlantic Coast of Spain connects the distribution of this species between the Mediterranean and Equatorial Africa.

RÉSUMÉ. - La capture de *Hypleurochilus bananensis* (Poll, 1959) sur la côte sudatlantique espagnole relie la distribution de cette espèce en Méditerranée aux deux localités de l'Afrique équatoriale où on l'a déjà trouvée.

Key-words. - Blenniidae, *Hypleurochilus bananensis*, ANE, Spain, New record.

Hypleurochilus bananensis (Poll, 1959) is characterized (Fig. 1) by having a branchiostegal membrane fused to isthmus and canines in both jaws, a ventral fin with I+4 rays and a dorsal fin with 15 soft rays, and a well branched supraorbital tentacle and body sides with 5 or 6 vertical bands (Bath, 1977; Bath and Wirtz,1981; Zander, 1986).

Hypleurochilus bananensis (Poll, 1959) was first described as *Blennius bananensis* Poll, 1959 from three specimens of unknown sex collected from the coast of the Congo River mouth, Zaire. Bath (1965) described a new species, *Hypleurochilus phrynus* Bath, 1965 from five female specimens captured in Algier harbour, and bases this new species on differences in the number of ventral fin rays, proportions of the body and colour, with respect to *Blennius bananensis* Poll, 1959. Later Ben-Tuvia (1971) recorded *Hypleurochilus phrynus* Bath, 1965 from the coast of Israel, based on two specimens captured at Haifa by Steinitz (Table I). Bath (1973) transferred *Blennius bananensis* Poll, 1959 to the genus *Hypleurochilus* Gill, 1861, making *Hypleurochilus phrynus* Bath, 1965 synonymous with *Hypleurochilus bananensis* (Poll, 1959). Tortonese (1975) recorded two specimens of *Hypleurochilus bananensis* from the Gulf of Naples that Giglioli in 1883 named *Blennius inaequalis*. Tortonese (1975) also refers to 11 specimens of *Hypleurochilus bananensis* held at the Genoa Museum, that were probably captured at a Mediterranean locality, but the author does not give any data about the origin or date of capture of these specimens. More recently Catalano (1978) found four specimens of *Hypleurochilus bananensis* at Palermo. Finally, Wirtz (1982) recorded this species at Lomé (Togo) on the Eastern African coast, but does not give the number of specimens nor date of capture (Table I).

The species *Hypleurochilus bananensis* was known from about 27 specimens before this investigation (Table I), and its distribution was mainly Mediterranean

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with the exception of the three specimens from Zaire and also from an East African locality in Togo (Fig. 2).

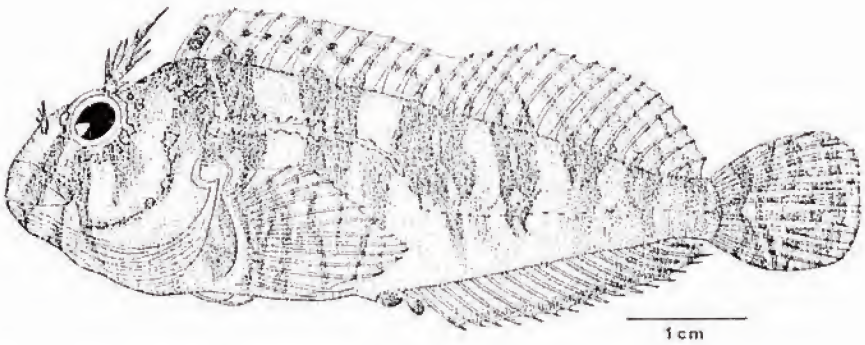

Fig. 1. - Adult male *Hypleurochilus bananensis* (drawn from preserved specimen).

Table I. - Data from the specimens in the literature and from those of this study. TL: Total length; M: Male; F: Female; * Type specimens; # Specimen measured by us.

AUTHOR	Nº - TL (mm)	SEX	DATE	CAPTURE LOCALITY
POLL (1959)	1- 77*	?	1948	Moanda-Tonde (ZAIRE)
	1- 35	?	08-1947	Moanda-Tonde (ZAIRE)
	1- 66	?	06-1948	Crique de Banana (ZAIRE)
BATH (1965)	1- 78.5*	F	05-1963	Algiers harbour (ALGERIA)
	1- 71.5	F	05-1963	Algiers harbour (ALGERIA)
	1- 56	F	05-1963	Algiers harbour (ALGERIA)
	2- ?	F	05-1963	Algiers harbour (ALGERIA)
BEN-TUVIA (1971)	1- 72.7#	F	09-1948	Haifa (ISRAEL)
	1- ?	?	?	? (ISRAEL)
TORTONESE (1975)	11- ?	?	?	Mediterranean
	2- ?	?	1883	Naples (ITALY)
CATALANO (1978)	1- 95	M	09-1973	Sperone, Palermo (ITALY)
	1-110	F	09-1975	Sperone, Palermo (ITALY)
	1- 78.5	F	09-1977	Sperone, Palermo (ITALY)
	1-120	M	09-1977	Sperone, Palermo (ITALY)
WIRTZ (1982)	?	?	?	Lomé (TOGO)
This study	5	2M, 3F	12-1986	Punta del Perro, Cádiz (SPAIN)
	17	8M, 9F	01-1987	Punta del Perro, Cádiz (SPAIN)
	2	M	01-1987	El Portil, Huelva (SPAIN)
	2	M	01-1987	Punta del Montijo, Cádiz (SPAIN)
	1	F	08-1987	Punta del Perro, Cádiz (SPAIN)
	7	4M, 3F	01-1988	Punta del Perro, Cádiz (SPAIN)
	12	5M, 7F	03-1988	El Portil, Huelva (SPAIN)
	14	11M, 3F	04-1988	El Portil, Huelva (SPAIN)
	1	M	04-1988	Punta del Perro, Cádiz (SPAIN)
	4	M	05-1988	El Portil, Huelva (SPAIN)
	3	2M, 1F	08-1988	El Portil, Huelva (SPAIN)
	2	M	07-1989	P.S. Cat. del Puerto, Cádiz (SPAIN)
	25	9M, 10F, 6?	08-1989	El Portil, Huelva (SPAIN)
	6	4M, 2F	09-1989	P.S. Cat. del Puerto, Cádiz (SPAIN)

MATERIAL AND METHODS

We have collected 101 specimens (56 males, 39 females, and 6 unsexed) during three years at four coastal localities from the Huelva and Cádiz provinces on the South Atlantic Coast of Spain: El Portil, Punta del Montijo, Punta del Perro and Punta de Santa Catalina del Puerto (Fig. 3, Table I). All the specimens were collected in the intertidal zone, the only coastal area searched, during low tide. The coastal localities where the specimens were found were mostly flat rocky intertidal areas that were submerged at high tide. These platforms are the result of erosion of the horizontal strata, they have shallow pools that may or not be interconnected at low tide. These rocky areas also have some patches of sand (Seoane-Gamba, 1965).

The majority of specimens were found hidden in cavities, in cracks on the underside of free rocks, or inside shells of dead oysters (*Crassostrea angulata*) as occurred at Punta del Montijo and Punta del Perro.

The sexes were distinguished by the shape of the urogenital papilla, although six specimens were too small to recognize the sex using external morphology.

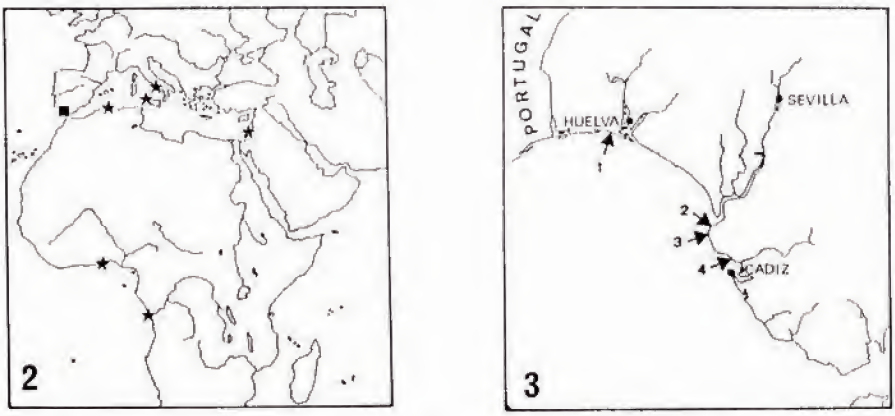

Fig. 2. - Distribution of *Hypleurochilus bananensis*. * Literature. ▪ This work.
Fig. 3. - Spanish localities of *Hypleurochilus bananensis* after this study. El Portil (1), Punta del Montijo (2), Punta del Perro (3) and Punta de Santa Catalina del Puerto (4).

RESULTS AND DISCUSSION

The sex ratio was nearly 3 males to 2 females. We know from the literature measurements from only ten specimens (Table I) to compare with those of our specimens (Table II). In this comparison our smallest was an unsexed specimen of 17.2 mm total length, 18 mm less than the smallest previously recorded. Nevertheless the largest of our specimens, a male of 85.3 mm total length, is much smaller than the 120 mm of a specimen found at Palermo (Table I). In our sample, the mean total length of males is statistically greater than that of females (U test, $p \leq 0.01$), as has also been observed in other blennioid species (Papaconstantinou, 1979; Helden and Wirtz, 1985).

Our 101 specimens of *H. bananensis* are the first found on the Atlantic coast of Europe and they are a new record for the Spanish fauna. The species, however, maintains its previous restricted distribution since its occurrence is at present confined to four localities in spite of having searched 18 localities of the South Atlantic coast of Spain. On the other hand, Bath and Wirtz (1981) point out

Table II. - Mean, and range in parenthesis, in millimetres, of the measurements of *Hypleurochilus bananensis*, from the South Atlantic coast of Spain. n: sample size.

	Males n= 56	Females n= 39
Total length [mm]	50 8 (20 3 - 85 3)	43 3 (27 0 - 70 8)
Standard length [mm]	42 4 (17 8 - 71 0)	36 1 (18 4 - 59 0)
Head length [mm]	12 9 (5 8 - 21 2)	11 2 (5 8 - 10 3)
Body height [mm]	11 1 (4 8 - 20 0)	9 1 (4 8 - 16 3)
Eye diameter [mm]	3 4 (1 7 - 5 0)	3 2 (1 7 - 4 5)
Caudal peduncle height [mm]	3 5 (1 6 - 5 3)	3 0 (1 5 - 4 2)

that the species inhabits the coast from Morocco to Zaire but, although it probably is found there, our localities are the only ones we know in the literature that connect the Mediterranean distribution of this species with the most northern African locality in Togo.

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